

Notice of Allowability	Application No.	Applicant(s)	
	10/649,844	BERGER, MICHAEL A.	
	Examiner	Art Unit	
	Peter-Anthony Pappas	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/16/07.
2. ☒ The allowed claim(s) is/are 1,2,4-7,9-12,14-28,30-38,40-52 and 54-57.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 2, 4-7, 9-12, 14-28, 30-38, 40-52 and 54-57 are allowed.
2. In regard to claims 1, 2, 4-7, 9, 11, 12, 21-26, 54 and 55 the prior art of record fails to teach or suggest a displacement field derivation unit configured to derive one of the displacement fields from one of the sequences of surface models by mapping the control points of the base surface model to positions in the surface of each of the surface models in the sequence, and by calculating a displacement of each control point from its mapped position in the first surface model in the sequence to its mapped position in each of the other surface models in the sequence.
3. In regard to claims 10 and 36 the prior art of record fails to teach or suggest wherein the facial reconstruction arrangements further includes a jaw immobilizer to minimize differences in jaw position during different poses in the sequence of facial poses involving the particular muscle movement.
4. In regard to claims 14-20 and 40-46 the prior art of record fails to teach or suggest wherein the displacement field derivation unit is configured to: re-position the control points of the base surface model to fit the shape of each particular surface model in the sequence of surface models to produce a sequence of deformed surface models approximating the original sequence of surface models but having the control points of the base surface model; calculate the displacements of the control points of the base surface model at each particular intensity value in the sequence of intensity values, by calculating the displacement of each control point from its position in the

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deformed surface model associated with the first intensity value in the sequence of intensity values to a position in the deformed surface model associated with the particular intensity value; and derive the displacement field by determining the displacements of the control points of the base surface model at intensity values intermediate to the intensity values in the sequence of intensity values, by interpolating between the displacements at the intensity values in the sequence of intensity values.

5. In regard to claims 27, 28, 30-35, 37, 38, 47-52, 56 and 57 the prior art of record fails to teach or suggest for each sequence of surface models, calculating a displacement of each control point from its mapped position in the first surface model in the sequence to its mapped position in each of the other surface models in the sequence, to derive a displacement field corresponding to that sequence of surface models, which displacement field generates a three-dimensional displacement vector that varies over the control points of the base surface model and over an intensity variable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter-Anthony Pappas whose telephone number is 571-272-7646. The examiner can normally be reached on M-F 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Peter-Anthony Pappas
Examiner
Art Unit 2628

PP


ULKA J. CHAUHAN
PRIMARY EXAMINER